

SYSTEM AND METHOD FOR CLASSIFYING DEFECTS IN AND  
IDENTIFYING PROCESS PROBLEMS FOR AN ELECTRICAL CIRCUIT

**ABSTRACT OF THE DISCLOSURE**

A method for performing circuit defect analysis and process problem identification includes applying a test signal to a circuit, obtaining a signal generated in response to the test signal, comparing the response signal to reference information, classifying a defect in the circuit based on a result of the comparing step, and identifying a problem in a manufacturing process which caused the defect based on the classification. The reference information may include one or more signal profiles corresponding to predefined types of defects that can occur during the manufacturing process. Defect classification is preferably performed by determining whether the response signal falls within one or more of the signal profiles. If the response signal falls within two or more signal profiles, then probabilities may be determined for each profile. The defect may then be classified as corresponding to the defect type whose signal profile has the highest probability. A processing system performs defect classification and process problem identification using a similar approach.